DERWENT-ACC-NO: 2000-180614

DERWENT-WEEK: 200016

TITLE: Servlet/Applet/HTML authentication process with single sign-on employs authentication data encrypted single sign-on cookie to provide secure Servlets

PATENT-ASSIGNEE: INT BUSINESS MACHINES CORP[IBMC]

PRIORITY-DATA: 1999RD-0429128 (December 20, 1999)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
RD 429128 A	January 10, 2000	N/A	003	G06F 000/00

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-DATE
RD 429128A	N/A	1999RD-0429128	December 20, 1999

INT-CL (IPC): G06F000/00

ABSTRACTED-PUB-NO: RD 429128A

BASIC-ABSTRACT:

NOVELTY - The process begins when a user uses their web browser to request content (such as a user's personal home page) from a content Servlet. The content Servlet will attempt to retrieve an SSO cookie from the web browser. If the cookie is not found, or its timestamp indicates that it has expired, the Servlet begins the login process.

DETAILED DESCRIPTION - Otherwise, the Servlet will use the authentication data encrypted in the cookie to authenticate the user in the Servlet's JVM. If this authentication fails, the Servlet will begin the login process. If it succeeds, it will send the content the user requested (the home page).

USE - For authentication of Servlet/Applet/HTML.

ADVANTAGE - (a) The user will not have to log in twice if the Java login Applet is used. The login Applet logs the user in to the Applet JVM, so all Applets later launched in that JVM will recognize the user as being logged in. Then the Applet sends a request to the login Servlet to continue the process; (b) Java and JavaScript are not required. If the user (or system administrator) does not expect to use authenticated Java Applets, the HTML login form can be used.

This will log the user in with a Servlet and set the Single Sign-On cookie. This login process only requires a web browser that supports cookies and secure connections via HTTPS; (c) Using a minimum of Java makes web-based applications more flexible and more likely to run in a wide variety of web browsers on a variety of platforms. Web browsers often implement Java differently, which sometimes necessitates browser-specific code. This code makes web applications more fragile and buggy, and it prevents them from being used with browsers or platforms that were not tested with them while they were being developed; (d) Less memory is used on the client in most cases. If the HTML login Is used, no Java classes are loaded on the client. The login Applet loads only a minimal set of Java class archives (significantly less than the ODS Applet Launcher). Any other Applets load additional class archives only as they are needed; (e) Configurable security. The user name and password are always sent over secure connections. The SSO cookie in the web browser is encrypted so it cannot be read easily. The domains which can retrieve the SSO cookie are administrator-controlled, so it can only be retrieved by trusted servers. In case the cookie is stolen from the network, it expires after an amount of time chosen by the ODS administrator. Other Servlets will respond via either HTTP or HTTPS, depending on the system administrator's preference. Applets are loaded via HTTP for technical reasons, but they always communicate back to the server via HTTPS or secure RMI; (f) Single Sign-On can also authenticate the user to use other web applications that support SSO.

DESCRIPTION OF DRAWING(S) - The diagram shows an overview of the authentication process.

CHOSEN-DRAWING: Dwg.1/1

TITLE-TERMS: AUTHENTICITY PROCESS SINGLE SIGN EMPLOY AUTHENTICITY DATA ENCRYPTION SINGLE SIGN COOKIE SECURE

DERWENT-CLASS: T01

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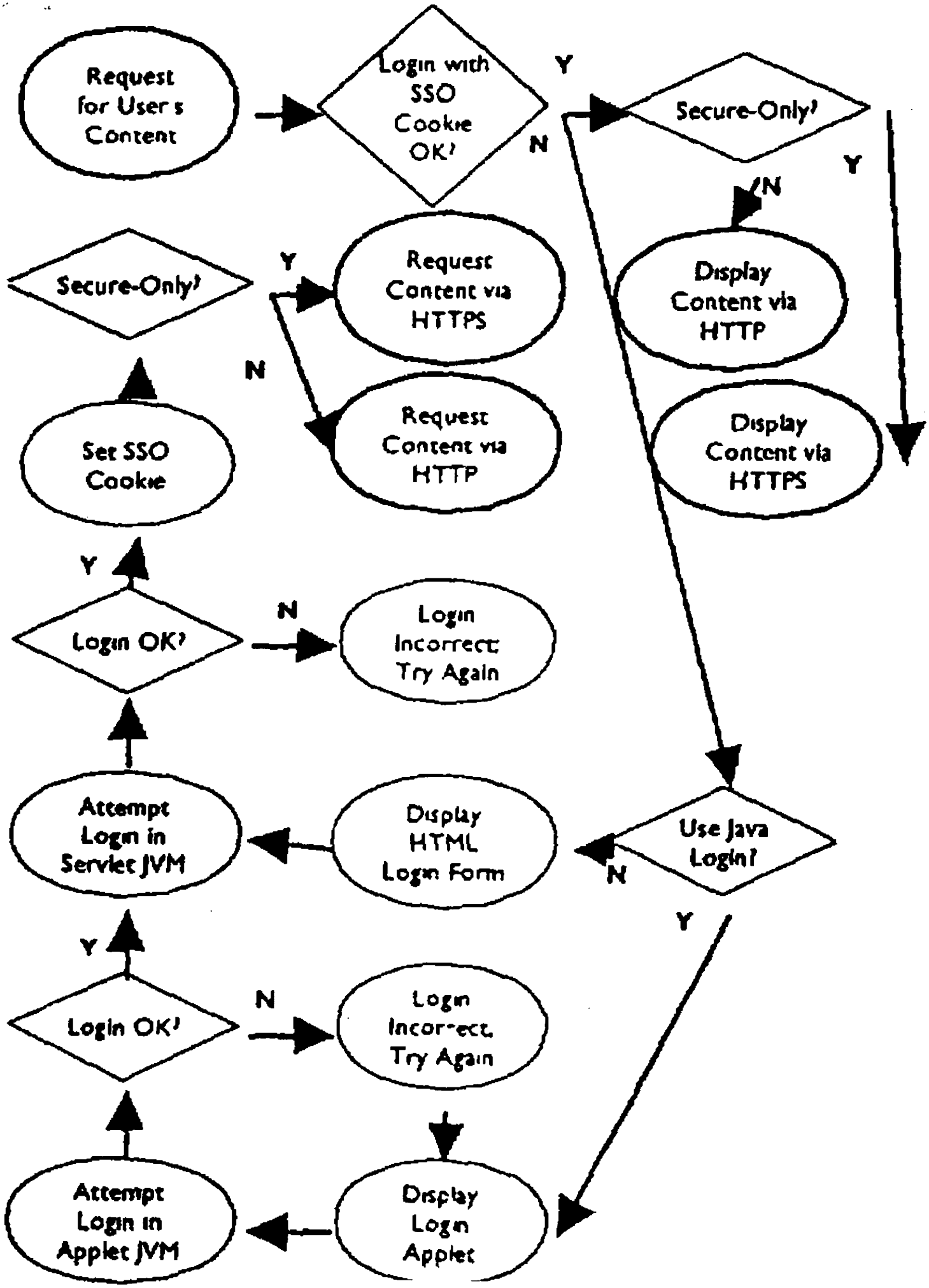
Request for User's Content
Login with SSO Cookie OK?
Y
N
Secure-Only?
Y
N
Display Content via HTTP
Display Content via HTTPS
Secure-Only?
Y
Request Content via HTTPS
N
Request Content via HTTP
Set SSO Cookie
Y
Login OK?
N
Login Incorrect Try Again
Use Java Login?
N
Y
Attempt Login in Servlet JVM
Display HTML Login Form
Y
Login OK?
N
Login Incorrect Try Again
Attempt Login in Applet JVM
Display Login Applet